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January 11, 2008

CDM Project File: 5000-55353

Ms. Ana Townsend  
California Regional Water Quality Control Board - Los Angeles Region  
320 W. 4th Street, Suite 200  
Los Angeles, California 90013

Subject: **Addendum No. 2 to Building 1/36 (Parcel C) Source-Area Groundwater In-Situ Reactive Zone Pilot Study Workplan (Work Plan)**  
**Request to Include Well WCC\_06S as a Contingency Extraction Well**  
Former C-6 Facility, 19503 South Normandie Avenue, Los Angeles, California  
File No. 95-036; SLIC No. 410; Site ID No. 1846000  
Compliance File CI-9310, Order No. R4-2007-0040

Dear Ms. Townsend:

Camp Dresser & McKee Inc. (CDM), on behalf of Boeing Corporate Real Estate (CRE) (formerly Boeing Realty Corporation), is hereby submitting this Addendum No. 2 to the above-referenced Work Plan (ARCADIS G&M, Inc., May 10, 2002) to the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB). The purpose of this addendum is to request approval from the LARWQCB for using an existing monitoring well WCC\_06S as a contingency extraction well for the biorecirculation pilot study under WDR Order No. R4-2007-0040, Compliance File CI-9310 (Site-Specific WDR Permit). This addendum supersedes the letter sent to LARWQCB regarding the request to inject extracted groundwater from WCC\_06S (CDM, December 12, 2007).

System startup and shakedown activities for the biorecirculation pilot study were initially planned to start in August 27, 2007. However, as mentioned in the Third Quarter 2007 Waste Discharge Requirements (WDR) Monitoring Report (CDM, October 26, 2007), a sustained flow of less than 1 gallon per minute (gpm) was observed from extraction well EWB001 during the startup, which is substantially less than the anticipated design flow of 12 gpm. Since then CDM has been implementing actions to increase the groundwater production rate for the pilot system close to the design or other suitable rate that would achieve the objectives of the biorecirculation pilot test. These included detailed reevaluation of existing hydrogeological data; aggressive redevelopment and short-term (1 to 3 hour) pumping tests of EWB001 and a few select existing wells; and performance of long-term (24 to 30 hour) constant rate Aquifer

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Ms. Ana Townsend  
January 11, 2008  
Page 2

Performance Tests (APTs) at wells EWB001 and WCC\_06S. These additional wells, including WCC\_06S, were selected for testing to provide additional extraction wells besides EWB001, which was the only extraction well included in the Site-Specific WDR Permit. Well WCC\_06S is one of the treatment zone performance monitoring wells (designated as Group B) proposed in the Monitoring and Reporting Program (MRP) under the Site-Specific WDR Permit (See attached Figure 1).

The results of the well redevelopment and APT activities indicated that well EWB001 may be able to produce a sustained flow of 5 gpm, which is less than the design flow of 12 gpm, but potentially sufficient enough flow to meet the objectives of the pilot study. The tests also indicated that well WCC\_06S is likely to produce a sustained flow of 7 gpm and possibly higher. A complete summary of the results of the well redevelopment and APT activities will be provided in the next WDR monitoring report.

Based on the above-mentioned results, CDM is proposing to add well WCC\_06S as a contingency extraction well for the biorecirculation pilot study. CDM believes that use of WCC\_06S as a contingency extraction well is appropriate for the following reasons:

- Ability to provide supplemental ground water as needed to augment flow from well EWB001 for implementing the pilot study;
- Ability to act as a sole source of groundwater (if necessary) for the pilot study, in the event that well EWB001 does not perform as planned; and
- Optimal location of the well for the pilot study (i.e. downgradient of the injection wells and within the pilot study treatment zone).

CDM hereby requests permission from LARWQCB to allow use of WCC\_06S as a contingency extraction well and proposes the following path forward for the pilot study.

- Start pilot study using well EWB001 at the flowrate of 5 gpm.
- Continue performance monitoring per the Site-Specific WDR Permit.
- Perform evaluation of the monitoring data on a continual basis during system operation to determine if the objectives of the pilot test (i.e. establishing proof-of-concept) are being met.



Ms. Ana Townsend  
January 11, 2008  
Page 3

The results of the evaluation will determine whether or not to bring WCC\_06S online. All extracted water from well WCC\_06S, including the recently generated APT water from this well, will be treated through the pilot system prior to re-injection as required by the Site-Specific WDR Permit. In addition, the current MRP will not be affected by this Addendum, as WCC\_06S will continue to be monitored and sampled per the MRP.

If you have any questions or concerns regarding this request, please call Robert Scott at (562) 497-6176 or Joe Weidmann at (805) 563-8600.

Very truly yours,

A handwritten signature in black ink that reads 'Ravi Subramanian'. The signature is written in a cursive style with a horizontal line underneath the name.

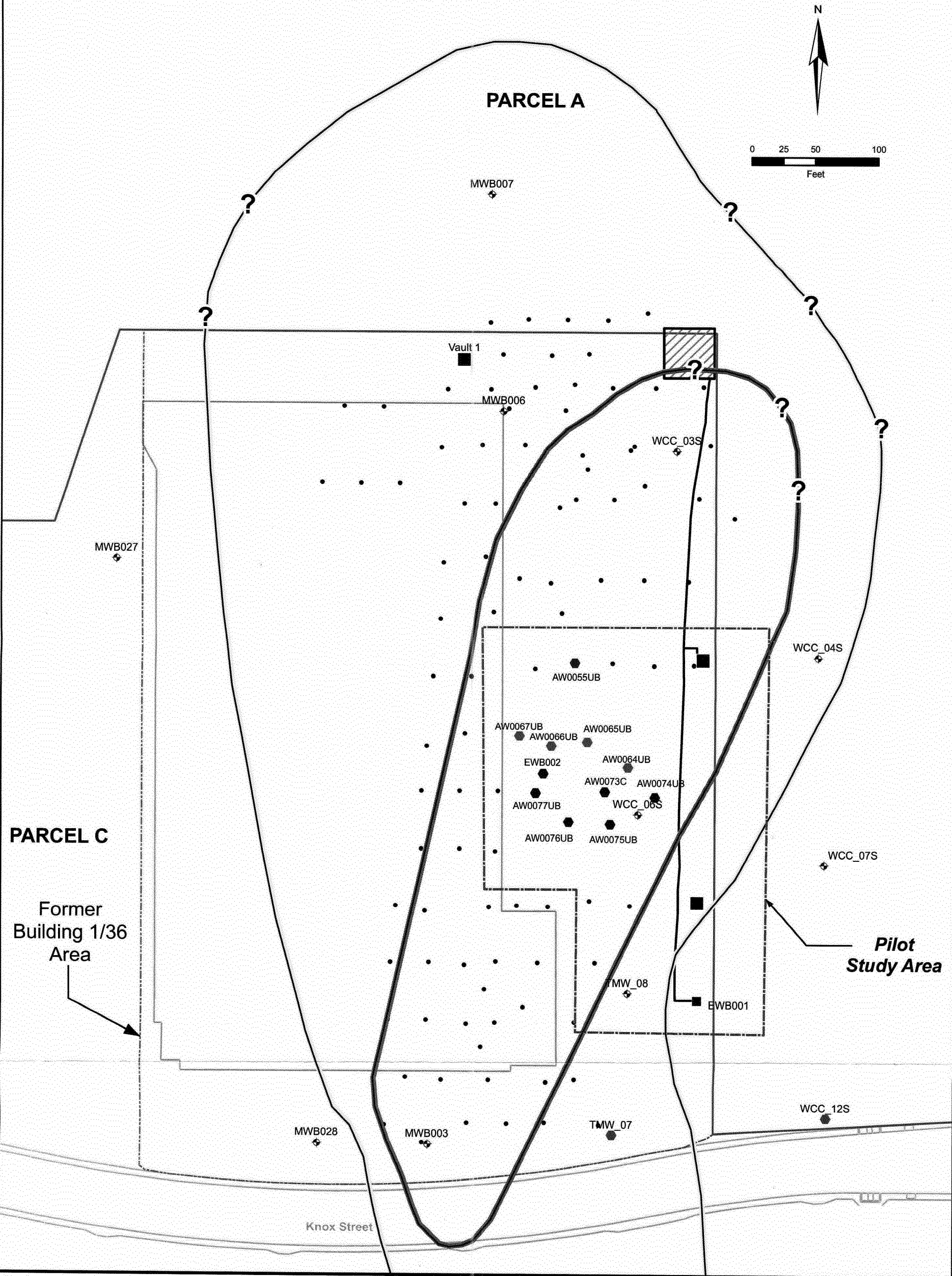
Ravi Subramanian, P.E  
Principal

Attachment

Cc: Robert Scott, The Boeing Company  
Joe Weidmann, Haley & Aldrich, Inc.

NOTE:

1. Existing well vaults and conveyance piping, as shown, will be used to transport extracted groundwater to the treatment compound and amended water back to select amendment wells.
2. A limited subset of the existing amendment and monitoring wells will be used for the pilot study.
3. The isoconcentration contours shown here represent maximum concentrations of either TCE or 1,1-DCE (not cumulative).



January 11, 2008



Legend

- Parcel Boundary
- Existing Compound
- Existing Vault
- Existing Electrical Conduit and Water Piping
- B-Sand Amendment Well
- B-Sand Extraction Well
- B-Sand Monitoring Well
- Group A Amendment Well (Upper B-Sand)
- Group B Monitoring Well ((6) Upper B-Sand and (1) C-Sand)
- Group C Downgradient Well (B-Sand)
- Group D Upgradient Well (Upper B-Sand)

TCE AND 1,1-DCE  
Isoconcentration Contours  
March, 2007 (B-Sand)

- 1,000 ug/L
- 5,000 ug/L

Boeing Realty Corporation  
Former C-6 Facility  
Building 1/36 Biorecirculation  
Pilot Study Well Layout

Figure 1